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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

EVANS, ARTHUR G

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 09/06/2005

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/550,219

Applicant(s)

JOHNSON ET AL.

Examiner

Arthur G. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

ARTHUR G. EVANS

SENIOR PRIMARY EXAMINER

Part of Paper No./Mail Date 20050831

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8, 10-11, 13-15, 18-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Niwa.

Note “receiving a print job having associated print data” (printer/device receives data, see lines 22-23 of column 10 and lines 4-9 or column 11), “writing the print data to a storage device” (data is stored in storage unit 23, see lines 19-20 of column 10 and lines 13-16 of column 11), “reading the print data from the storage device concurrently with the writing of the print data to the storage device” (print data is printed by reading data from storage device simultaneously with data transfer into the storage device, lines 19-22 of column 11 and lines 29-33 of column 10) and “printing the print data read from the storage device” (device is a laser print which print data from storage unit 21, see lines 22-25 of column 10) as claimed in claim 1 of Niwa.

Note “reading the print data associated with the print job from the storage device as long as at least a portion of the print data associated with the print job is available on the storage device” (printer prints data read from the storage device until complete document printed) as claimed in claim 2 of Niwa.

Note “generating a message indicating that the print job is pending” (message/status is communicated to host regarding job status, see, lines 43-48 of

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column 10, lines 51-60 of column 9 and lines 50-60 of column 11) as claimed in claim 3 of Niwa.

Note, "initiating the reading of the print data from the storage device in response to recognition of the message" (operation resumes upon receipt of error clear command, see, lines 43-48 of column 10, lines 51-60 of column 9 and lines 50-60 of column 11) as claimed in claim 4 of Niwa.

Note "maintaining status attributes to identify a data file for the print job that has been created on the storage device to spool the print data, and to identify when at least a portion of the print data associated with the print job becomes available on the storage device" (status of memory includes area reserved information, see lines 50-60 of column 11) as claimed in claim 5 of Niwa.

Note "monitoring the status attributes to determine when the print data associated with the print job becomes available on the storage device: and initiating the reading of the print data from the storage device upon recognition of the status attributes indicating that at least a portion of the print data associated with the print job is available on the storage device"(status of memory includes area reserved information, see lines 50-60 of column 11) as claimed in claim 6 of Niwa.

Note "suspending reading of the print data associated with the print job if the quantity of the print data written to the storage device is less than a predetermined number of bytes" (reading of the print data stops when there is no data remaining) as claimed in claim 7 of Niwa.

Note "suspending reading of the print data associated with the print job when all of the print data written to the storage device has been read from the storage device" (reading of the print data stops when there is no data remaining) "but before the print data has been written to the storage device in its entirety" (reading would stop if there was no data whether printing was done or not) as claimed in claim 8 of Niwa.

Note "resuming reading of the print data when additional print data has been written to the storage device" (operation resumes upon receipt of error clear command, see, lines 43-48 of column 10, lines 51-60 of column 9 and lines 50-60 of column 11) as claimed in claim 10 of Niwa.

Note "reading the print data from the storage device only after the writing of the print data has completed, if the print data is associated with predetermined one or more file types" (for jobs types with data storage speed much greater than print speed, buffer an print is set, see lines 19-24, column 10 and lines 3-14 of column 8) as claimed in claim 11 of Niwa.

Note "reading a number of bytes of the print data from the storage device that is above a number of bytes of the print data that has been written to the storage device" (all of the print data of one print job is finished before reading the data from the next print job) as claimed in claim 13 of Niwa

Note "updating despool availability status to identify the print data as available for reading from the storage device upon creation of a data file on the storage device to which the print data is directed" (availability is communicated to identify that print data is

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available for printing in the buffer and print mode print file is created first, see lines 62-4 of columns 12-13) as claimed in claim 14 of Niwa

Note "monitoring the despool availability status to determine when to initiate the reading of the print data from the storage device" (availability is determined to determine when print data is available for printing in the buffer, see lines 62-4 of columns 12-13) as claimed in claim 15 of Niwa

Note "at least one input channel to receive the print job requests" (printer/device receives data thru communication input 3 receives print job from host, see front figure, see lines 22-23 of column 10 and lines 4-9 of column 11), "a storage medium to store print data associated with the print job requests" (medium of disk drive and/or medium of ram is used for storing), "a spooling module coupled to receive the print job requests and associated print data, and to write the print data to the storage medium" (data writing means, see lines 13-18 of column 11), "a despooling module to receive notification of an availability of the print data on the storage medium" (data read out means, see lines 19-25 of column 11), "concurrently read a first portion of the print data from the storage medium as a second portion of the print data is written to the storage medium" (print data is printed by reading data from storage device simultaneously with data transfer into the storage device, lines 19-22 of column 11 and lines 29-33 of column 10) and "a print engine to print the print data read from the storage medium" (print engine 11 prints data from storage device) as claimed in claim 18 of Niwa.

Note "an active spool indication to indicate that the print data is being written to the storage medium" (message/status is communicated to host regarding job status,

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see, lines 43-48 of column 10, lines 51-60 of column 9 and lines 50-60 of column 11) as claimed in claim 19 of Niwa.

Note "write count indication to indicate a number of bytes of the print data that has been written to the storage medium" (data length is recognize, see lines 15-21 of column 6) as claimed in claim 20 of Niwa.

Note "reading the first portion of the print data that does not exceed the write count indication" (reserving limits for memory are used, see lines 19-25 or column 11) as claimed in claim 21 of Niwa.

Note "storage medium is a hard disk" (see lines 49-54 of column 3) as claimed in claim 22 of Niwa.

Note "hard disk is formatted with a spooler directory to reserve storage for the print data associated with the print job requests" (area reserving means reserves storage for print job, see lines 26-35 of column 11) as claimed in claim 23 of Niwa.

Note "hard disk is resident on the printing device" (see lines 49-54 of column 3 and front figure) as claimed in claim 24 of Niwa.

Note "one or more client systems arranged in a network to generate print jobs identifying print data for printing" (host computer 2 is client), "transmission media coupled to receive the print jobs and to transfer the print jobs initiated on the network" (3 is coupled host computer and transfers print job to printer/device receives data, see lines 22-23 of column 10 and lines 4-9 or column 11), "a printing device coupled to the network via the transmission media to receive and process the print jobs" (printer is connected to network 3 and received print job), "a storage medium to store print data

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associated with the print jobs" (medium of disk drive and/or medium of ram is used for storing), "a spooling module coupled to receive the print jobs and associated print data, and to write the print data to the storage medium" (data is stored/spooled in storage unit 23, see lines 19-20 of column 10 and lines 13-16 of column 11), "a despooling module to receive notification of an availability of the print data on the storage medium, and to concurrently read a first portion of the print data from the storage medium as a second portion of the print data is written to the storage medium; and a print engine to print the print data read from the storage medium" (print data is printed by reading/despooling data from storage device simultaneously with data transfer into the storage device, lines 19-22 of column 11 and lines 29-33 of column 10)) as claimed in claim 25 of Niwa.

Note "at least one input channel to receive the print job requests" (3 is a input channel) as claimed in claim 26 of Niwa.

Note "a job monitor module to maintain spooling status including an active spool indication to indicate that the print data is being written to the storage medium" (message/status is communicated to host regarding job status, see, lines 43-48 of column 10, lines 51-60 of column 9 and lines 50-60 of column 11) as claimed in claim 27 of Niwa.

Note "a job monitor module to maintain spooling status including a write count indication to indicate a number of bytes of the print data that has been written to the storage medium" (status of memory includes area reserved information, see lines 50-60 of column 11) as claimed in claim 28 of Niwa.

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Note "reading the first portion of the print data that does not exceed the write count indication" (reserving limits for memory are used, see lines 19-25 or column 11) as claimed in claim 29 of Niwa.

Note "computer-read able program storage medium tangibly embodying a program of instructions executable by a printer system to process print jobs" (RAM and/or hard disk contain control program to process print jobs), "receiving a print job having associated print data" (printer/device receives data, see lines 22-23 of column 10 and lines 4-9 or column 11), "writing the print data to a storage device" (data is stored in storage unit 23, see lines 19-20 of column 10 and lines 13-16 of column 11), "reading the print data from the storage device concurrently with the writing of the print data to the storage device" (print data is printed by reading data from storage device simultaneously with data transfer into the storage device, lines 19-22 of column 11 and lines 29-33 of column 10) and "printing the print data read from the storage device" (device is a laser print which print data from storage unit 21, see lines 22-25 of column 10) as claimed in claim 30 of Niwa.

Note "creating a file on a storage device in which to store the print job" (print mode print file is created first, see lines 62-4 of columns 12-13), "writing print data associated with the print job to the storage device" (data is stored in storage unit 23, see lines 19-20 of column 10 and lines 13-16 of column 11), "maintaining a status indicator indicating whether the print data is currently being written to the storage device" (availability is determined to determine when print data is available for printing in the buffer, see lines 62-4 of columns 12-13), "monitoring the status indicator to determine if

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the print job is currently being written to the storage medium" (managing the status of memory for outputting information, see lines 54-60 of column 11), "retrieving the print data associated with the print job from the storage medium concurrently with the writing of the print data to the storage medium" (print data is printed by reading data from storage device simultaneously with data transfer into the storage device, lines 19-22 of column 11 and lines 29-33 of column 10), "the print data retrieved is the portion of the print data associated with the print job that has been written to the storage device" (data read out means, see lines 19-25 of column 11) and "sending the retrieved print data associated with the print job to the printing device for printing" (device is a laser print which print data from storage unit 21, see lines 22-25 of column 10) as claimed in claim 31 of Niwa.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwa.

Niwa teaches the invention substantially as claimed. However Niwa does not teach "generating an end of job indication when the print data has been written to the storage device in its entirety" as claimed in claim 9. End of job indication, i.e. control

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character which indicates end of job, is the most common way to determine the end of job in the field of endeavor of the invention. Without a control character, which indicates end of job, two documents sometimes run together. It would have been to one of ordinary skill in the art to use an end of job indication in the system of Niwa for the advantage of accurately determining when it is the end of job.

With respects to claim 12, "PDF file type" is not taught. PDF or page description file is a common data type for text and other documents in the same field of invention as claimed. It would have been obvious to one of ordinary skill in the art to use PDF in the system of Niwa because of its compact data size and to permit compatibility with computer that use PDF.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niwa in view of Popelka et al. Niwa teaches "monitoring the despool availability status comprises monitoring the despool availability status using a back-end despooling" (printing and despooling begins after all data is received i.e. backward despooling, see lines 19-28 of column 10) as claimed in claim 16 and "updating the despool availability status comprises updating the despool availability status using a front-end spooling" (printing and despooling begins before all data is received i.e. front-end despooling, see lines 29-39 of column 10) as claimed in claim 17. However Niwa does not teach "daemon" as claimed. Popelka et al teach spooling/despoiling daemon (see lines 6-7 in column 9) as claimed in the same field of endeavor as claimed. It would have been obvious to one of ordinary skill in the art to use daemons in the system of Niwa for the advantage of transparent spool operation.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Applicant's arguments filed 12-17-2003 have been fully considered but they are not persuasive. The examiner's rejection 12-17-03 covers issues argued by the applicant.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is **(571) 272-2600**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Art Evans whose telephone number is (571) 272-7403.

August 31, 2005


ARTHUR G. EVANS
SENIOR PRIMARY EXAMINER